

Xu, X., Dockery, D.W., and Wang, L., "Effects of Air Pollution on Adult Pulmonary Function," Archives of Environmental Health 46(4): 198-206, 1991.

The authors conducted a study to determine potential respiratory health effects of indoor and outdoor air pollution. Lung function measurements were performed on 1440 adults who were 40-69 years of age and who had never smoked. Outdoor ambient air pollution measurements from the World Health Organization Global Air Pollution Monitoring Station were utilized. Heating with coal was reportedly associated with reduced FEV(1.0) and FVC. Living in the residential area was apparently associated with an additional reduction in FEV(1.0) and FVC. The authors reported that "after we adjusted for age, height, and sex, an inverse linear association was found" between outdoor SO₂ (or TSPM) concentration and FEV(1.0) and FVC in subjects who had and had not used coal stove heating. The authors concluded that "not only was coal heating an important risk factor for pulmonary function, but it was a major confounding factor in the analysis of outdoor air pollution effects."

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